



Louisville Metro Air Pollution Control District  
701 West Ormsby Avenue, Suite 303  
Louisville, Kentucky 40203-3137



May 18, 2020

**Federally-Enforceable District-Origin Operating Permit  
(FEDOOP)  
Statement of Basis**

**Source:** Coral Graphics Services, Inc.  
4700 Commerce Crossings Drive  
Louisville, KY 40229

**Owner:** Coral Graphics Services, Inc.  
4700 Commerce Crossings Drive  
Louisville, KY 40229

Application Documents: See Table I-9

Draft Permit: 04/15/2020

Permitting Engineer: Randy Schoenbaechler

Permit Number: O-1562-20-F

Plant ID: 1562

SIC: 2752

NAICS: 323110

**Introduction:**

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

The purpose of this permit is to renew the Federally Enforceable District Origin Operating Permit.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), particulate matter less than 10 microns (PM<sub>10</sub>), and particulate matter less than 2.5 microns (PM<sub>2.5</sub>). Jefferson County is classified as a nonattainment area for ozone (O<sub>3</sub>). This facility is located in the portion of Jefferson County that is an attainment area for sulfur dioxide (SO<sub>2</sub>).

**Permit Application Type:**

☐ Initial issuance

Permit Revision

☒ Permit renewal

☐ Administrative

☐ Minor

☐ Significant

**Compliance Summary:**

☒ Compliance certification signed

☐ Compliance schedule included

☐ Source is out of compliance

☒ Source is operating in compliance

**I Source Information****1. Product Description:**

Coral Graphics Services, Inc. operates printing presses and UV coaters

**2. Process Description:**

Coral Graphics Services, Inc. is a printshop operating lithography presses, UV coaters, and laminators to produce custom prints for various customers.

**3. Site Determination:**

Coral Graphics occupies the same building as Dynamic Graphic Finishing which operates an embossing machine and a foil stamping machine. Both companies are under common control and Dynamic Graphic Finishing processes materials produced by Coral Graphics. However, it has been determined there are no emissions from either the embossing machine or the foil stamping machine.

**4. Emission Unit Summary:**

<b>Emission Unit</b>	<b>Equipment Description</b>
U1	Printers and Laminators
U2	PM Processes
U3	VOC Processes

**5. Fugitive Sources:**

The source identified no fugitive sources of emissions.

**6. Permit Revisions:**

<b>Permit No.</b>	<b>Public Notice Date</b>	<b>Issue Date</b>	<b>Change Type</b>	<b>Description/Scope</b>
O-1562-14-F	12/06/2014	01/23/2015	Initial	Initial Permit Issuance
O-1562-14-F (R1)	02/10/2017	03/14/2017	Sig.	Permit revision to include: permit C-1562-1003-16-F and emission units for previously omitted equipment. Update to General Condition 10, removal of greenhouse gas limits
			Admin	Addition of Insignificant Activities table.

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
				Addition of a Plantwide section Update to General Condition 12 and document submission address. Updates to Acronyms and Abbreviations list Update to Preamble
O-1562-20-F	04/15/2020	05/18/2020	Renewal	Reissuance of Permit including updating permit language and format and a correction to remove atmospheric evaporator as a control in Unit 1.

**7. Construction Permit History:**

Permit No.	Effective Date	Description
None	NA	NA

**8. Application and Related Documents**

Document Number	Date	Description
128329	5/24/2016	Letter regarding atmospheric evaporator
126093	12/10/2019	Email Application for FEDOOP
126101	12/11/2019	Hard copy of Application for FEDOOP
126159	12/12/2019	Application Resubmittal
127405	1/6/2020	Requested SDS of Glue

**9. Emission Summary**

Pollutant	District Calculated PTE (ton/yr)	Pollutant that triggered Major Source Status (based on PTE)
CO	0.00	No

Pollutant	District Calculated PTE (ton/yr)	Pollutant that triggered Major Source Status (based on PTE)
NO <sub>x</sub>	0.00	No
SO <sub>2</sub>	0.00	No
PM <sub>10</sub>	10.09	No
VOC	309.16	Yes
Total HAPs	44.04	Yes
Single HAP > 1 tpy		
HAP Xylene	23.60	Yes

**10. Applicable Requirements**

- ☐ 40 CFR 60      ☒ SIP      ☐ 40 CFR 63  
☐ 40 CFR 61      ☒ District Origin      ☐ Other

**11. Referenced Federal Regulations:**

The source has no federal requirements.

**12. Non-Applicable Regulations:**

None

**II Regulatory Analysis****1. Stratospheric Ozone Protection Requirements:**

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Coral Graphics Services, Inc. does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

**2. Basis of Regulation Applicability****a. Applicable Regulations**

Regulation	Title	Basis
2.17	Federally Enforceable District Origin Operating Permits	Specifies requirements for potentially-major sources to

Regulation	Title	Basis
		obtain a permit as a synthetic minor source
5.00	Definitions	<b>STAR</b> These definitions apply to terms ae used in regulations in Part 5 and Regulation 1.06 Section5.
7.08	Standards of Performance for New Process Operations	Applies to each process operation, except any process otherwise regulated by any other portion of Regulation 7, with respect to those pollutants otherwise regulated
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	Applies to each affected facility not elsewhere regulated in Regulation 7 as to emissions of VOCs

**b. Plantwide**

Coral Graphics Services, Inc. is potentially major for VOC, Total HAP, and Single HAP Xylene. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of 21 tons per year for VOC, 10 tons per year of total HAP emissions, and 5 tons per year of an individual HAP, to be classified as a synthetic minor (FEDDOOP) source.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Coral Graphics Services, Inc. has requested emission limits of less than 21 tons per year for all regulated air pollutants, less than 10 tons/year for total HAPs and less than 5 tons per year for each individual HAP to be considered exempt from local TAC (STAR) regulations, as defined by Regulation 5.00, section 1.13.5.

Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit regular reports to show compliance with the permit. Compliance reports and compliance certifications shall be

signed by a responsible official and shall include a certification statement per Regulation 2.1. The compliance reports are due within 60 days of the end of the reporting period:

<b><u>Reporting Period</u></b>	<b><u>Report Due Date</u></b>
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

**c. Emission Unit U1 – Printers and Laminators**

<b>EP</b>	<b>Description</b>	<b>Applicable Regulations</b>
E1	Komori, model LS 440 P, 4-color, sheet-fed offset lithography press, 40"x28" paper stock, batch, auto wash, corn starch anti-sticking spray	2.17, 7.08, 7.25
E2	Komori, model LS 840 P, 8-color, sheet-fed lithography press, 40"x28" paper stock, batch, auto wash, corn starch anti-sticking spray	2.17, 7.08, 7.25
E3	Komori, model LS 840 P, 8-color, sheet-fed offset lithography press, 40"x28" paper stock, auto wash, batch, corn starch anti-sticking spray	2.17, 7.08, 7.25
E4	Komori, model GL 640-45C, 6-color, UV press, auto wash	2.17, 7.25
E5	Komori, model 1040 P, 10-color sheet-fed lithography press, auto wash, continuous, corn starch anti-sticking spray	2.17, 7.08, 7.25
E6	Komori, model 828, 8-color, offset printing press, auto wash, continuous, corn starch anti-sticking spray	2.17, 7.08, 7.25
E7 (IA)	Steinemann UV coater, model GLM102, 40"x28" paper stock, batch	2.17, 7.25
E8 (IA)	Man Roland sheet-fed UV press, batch	2.17, 7.25
E9 (IA)	Sakurai, model SC102DX UV coater, sheet fed	2.17, 7.25
E10 (IA)	Sakurai, model SC102DX UV coater, sheet fed	2.17, 7.25
E11 (IA)	(4) Genesis, model GBC 30, batch, no emissions	2.17
E12 (IA)	(1) Genesis, model GBC 40, batch, no emissions	2.17

**i. Standards**

**(1) Opacity**

- (a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20% for this equipment.

**(2) PM**

- (a) The emission standard for PM for the equipment in the emission unit was determined in accordance with Regulation 7.08, section 3.1.2 as follows:

$$\text{PM lb/hr limit} = 3.59 * (\text{process weight, tons/hr})^{0.62}$$

**(3) VOC**

- (a) Regulation 7.25, section 3 determines the limits for VOC containing materials to demonstrate Best Available Control Technology (BACT).
- (b) Regulation 7.25, section 3 determines operating requirements for processes that use VOC containing materials.

**d. Emission Unit U2 – PM Processes**

EP	Description	Applicable Regulations
E13	Paper scrap system: cyclone & baler	2.17, 7.08
E14 (IA)	Bindery operation	2.17, 7.08
E15 (IA)	Bobst SA, model 0571-068-02, embossing machine	2.17, 7.08
E16 (IA)	Bobst SA, model 0572-016-04, foil stamping machine	2.17, 7.08

**i. Standards**

**(1) Opacity**

- (a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20% for this equipment.

**(2) PM**

- (a) The emission standard for PM for the equipment in the emission unit was determined in accordance with Regulation 7.08, section 3.1.2 as follows:

$$\text{PM lb/hr limit} = 3.59 * (\text{process weight, tons/hr})^{0.62}$$

**e. Emission Unit U3 – VOC Processes**

EP	Description	Applicable Regulations
E17 (IA)	Plate developer, continuous, 2 x 5' bath	2.17, 7.25
E18 (IA)	Plate developer, continuous, 2 x 5' bath	2.17, 7.25
E19 (IA)	Sakurai screen manufacturing, batch	2.17, 7.25

**i. Standards**

**(1) VOC**

- (a) Regulation 7.25 establishes a combined limit for emission points E17, E18, and E19 as a BACT analysis has not been submitted. A BACT determination is required to be performed for any future construction/modification subject to Regulation 7.25 for any emissions above 5 tpy.

**III Other Requirements**

**1. Temporary Sources:**

The source did not request to operate any temporary facilities.

**2. Short Term Activities:**

The source did not report any short term activities.

**3. Emissions Trading:**

The source is not subject to emission trading.

**4. Alternative Operating Scenarios:**

The source did not request any alternative operating scenarios.

**5. Compliance History:**

There are no records of any violations of the terms of the present or prior construction or operating permits.

**6. Calculation Methodology or Other Approved Method:**

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device's efficiency. The following emission factors and calculation methodology shall be used unless other methods or emission factors are approved in writing by the District.

**a. VOC/HAP**

**i. Off-Set Lithography Sheet-Fed Presses**

$$E_{VOC/HAP} = (I_{VOC/HAP})(I_{Ret}) + (FS_{VOC/HAP}) + (BW_{VOC/HAP}) + (RW_{VOC/HAP}) + (C_{VOC/HAP}) + (CS_{VOC/HAP})(R)$$

Where,

$E_{VOC/HAP}$  = lb VOC/HAP Emissions

$I_{VOC/HAP}$  = lb of sheet-fed ink used × weight % VOC/HAP in each ink

$I_{Ret}$	=	0.050 (Derived from: 1 - Ink oil retention factor of 0.95 for non-heatset inks)
$FS_{VOC/HAP}$	=	Qty of fountain solution used (gallons) $\times$ VOC/HAP content of fountain solution as applied (lb/gal)
$BW_{VOC/HAP}$	=	Qty of blanket wash used (gallons) $\times$ VOC/HAP content of blanket wash as applied (lb/gal)
$RW_{VOC/HAP}$	=	Qty of roller wash used (gallons) $\times$ VOC/HAP content of roller wash as applied (lb/gal)
$C_{VOC/HAP}$	=	Qty of coatings used (gallons) $\times$ VOC/HAP content of coating as applied (lb/gal)
$CS_{VOC/HAP}$	=	Qty of each cleanup solvent used (gallons) $\times$ VOC/HAP content as applied (lb/gal)
$R$	=	1.0 or 0.50 (Fraction of cleanup solvent unrecovered)

An “R” factor of 0.50 (50 percent VOC credit) may be used for solvents (vapor pressure  $\leq$  5 mm Hg at 68°F) used to manually clean press components if the rags/wipes used to manually clean press components are stored in closed/sealed containers immediately after use and the company can document the quantity of solvent recovered.

ii. The owner or operator shall account for the insignificant activity VOC emissions from printing, laminating, and plate developing when totaling the annual plantwide emissions. Since the emissions are minor the owner or operator may use the potential VOC emissions as the annual emissions or may use a mass balance assuming all VOC throughput is emitted. District approved PTE is as follows:

- Steinemann UV (E7) = 1.1 ton VOC/year
- Man Roland UV (E8) = 0.7 ton VOC/year
- Sakurai, model SC 102 DX (E9) = 0.4 ton VOC/year
- Sakurai, model SC 102 DX (E10) = 0.4 ton VOC/year
- Plate developing (E17) = 0.000000211 ton VOC/year
- Plate Developing (E18) = 0.00000000211 ton VOC/year
- Screen manufacturing (E19) = 0.22 ton VOC/year

## 7. Insignificant Activities

Equipment	Qty.	PTE (ton/yr)	Regulation Basis
Steinemann UV coater, model GLM102, 40"x28" paper stock, batch (Emission Unit U1 – E7)	1	VOC = 0.114	Regulation 1.02
Man Roland sheet-fed UV press, batch (Emission Unit U1- E8)	1	VOC = 0.066	Regulation 1.02
Sakurai, model SC102DX UV coater, sheet fed (Emission Unit U1 – E9 & E10)	2	VOC = 0.044	Regulation 1.02
Plate developer, continuous, 2 x 5' bath (Emission Unit U3 – E17 & E18)	2	VOC = 0.0425	Regulation 1.02

<b>Equipment</b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
Sakurai screen manufacturing, batch (Emission Unit U3 – E19)	1	VOC = 0.218	Regulation 1.02

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.